

Climatological Data for July, 1909.

DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

INTRODUCTION.

July, 1909, in the Columbia River drainage area was unusually cool and wet. There were no destructive storms, and taken as a whole the weather was favorable for the farmer, the engineer and the transportation companies. The rains were well distributed and they were a contributing cause in preventing forest fires which at this season of the year frequently gain headway, and later do immense damage to standing timber. Water for irrigation and placer mining was plentiful and there was sufficient water in the small streams to float the season's cut of logs to the mills. Stream flow measurements made during June and July by the Water Resources Branch of the U. S. Geological Survey in central Oregon showed, however, a smaller amount of water than was expected from the reports received earlier in the season regarding the winter's supply of snow in the mountains. Most of the high pressure areas appearing off the north Pacific coast changed their courses to the eastward before advancing as far northward as usual, and consequently the northwest winds, which are the fair weather winds, did not blow with their ordinary regularity, especially in the interior districts where, in the north, the records show the prevailing winds to have been from the southwest. In the summer southwest winds are relatively cool winds and when they blow, more or less cloudiness prevails, especially in the daytime. It was this daytime cloudiness that shielded the ground from the direct rays of the sun and to a large extent prevented high day temperatures. The night temperatures over the entire district were nearly normal, but the day temperatures averaged considerably below normal, and the cool weather so general in the district is largely attributable to low day temperatures rather than to a uniform decline in both day and night temperatures.

TEMPERATURE.

Over the greater portion of the drainage area of the Columbia River relatively warm weather prevailed on the 2d and 3d, the 14th and 15th, the 21st to the 24th, inclusive, and on the 30th and 31st, and it was during one or another of these warm periods that the maximum temperature of the month occurred in the various subdrainage areas. The highest temperature reported within the district was 110° on the 23d, at Glenns Ferry, Idaho, a station near the Snake River.

The principal cool periods were from the 6th to the 12th inclusive and from the 25th to the 28th, inclusive. Minimum temperatures below the freezing point occurred at many of the mountain stations during these periods, but such temperatures are not unusual in elevated localities in this district. No damaging temperatures were reported in the agricultural sections. The mean temperatures were highest in the bottom lands of the Snake River over the lower half of its course, and along the Columbia River from the mouth of the Spokane River to The Dalles, in Oregon. These bottom lands and those on the tributaries in the vicinity are largely devoted to the raising of fruit, and the weather of the month was especially favorable for this crop.

PRECIPITATION.

Most of the precipitation that occurred during the month fell during two periods, one beginning on the 4th and lasting

intermittently until the morning of the 12th, and the other beginning on the 25th and lasting until the evening of the 28th. These rainy periods nearly correspond to the cool spells heretofore described and to a certain extent illustrate the connection between surface temperature and rainfall in this district during the summer time. While the monthly rainfall was the heaviest on record at a number of localities there were no individual storms heavy enough to cause floods and washouts, and traffic suffered little if any interruption through the interference of the elements. Over the drainage areas of the Kootenai, Missoula, and Flathead rivers in Montana, and the Snake River in Wyoming the rainfall was mostly in the form of thunderstorms. In Idaho, eastern Washington, and eastern Oregon thunderstorms were less frequent, and in western Washington and western Oregon none was reported.

The region having the greatest rainfall in proportion to the normal was in Montana, northern Idaho and northeastern Washington. Over this area the rainfall was between 2 and 4 inches, while in ordinary years it is less than half of this amount. Another region with a large excess of rainfall included the area covered by the Blue Mountains in Oregon and their offshoots in Washington. In this section the rainfall averaged more than 2 inches while the normal for the month is slightly less than an inch.

Notwithstanding the heavy rainfalls in nearly all parts of the district, the streams fell rapidly owing to their having been swollen to their full capacity during the preceding month by the melting of the snow in the mountains, and the July rains were able only to check what otherwise would have been a more rapid fall than that which occurred. Also it is probable that the dryness of the soil at this season of the year permitted more than the usual amount of precipitation to sink into the ground, and not so much water found its way to the streams and rivers as would have been the case if the ground had been less dry. In the sections where irrigation is practised the rainfall was generally less than an inch, and while it was helpful it was not sufficient to reduce materially the quantity of irrigation water required for the crops.

In many localities the farmers were in the midst of their haying when the rains came and as it was so unusual to have so much rain at this season of the year the necessary precaution was not exercised and consequently the hay crop suffered considerable damage through the farmers not being able to properly cure it in the fields. Fears were also entertained that early grain that had been cut and shocked would be damaged by the rains of the last decade, but these fears proved groundless, and instead the rains were of benefit to all late crops.

The greatest monthly rainfall was 4.93 inches at Headworks, Oreg., a station on the eastern slope of the Willamette watershed, and the greatest twenty-four hour rainfall was 2.77 inches on the 27th at Orofino, Idaho, in the Nez Perce watershed. The only snowfall reported was a trace at Silver City in Idaho. At the close of the month considerable snow remained in the high mountains and it is thought that more than the usual amount will remain in these mountains throughout the summer. In Montana hail fell on a number of dates, but it did no material damage.

TABLE 1.—Climatological data for July, 1909. District No. 12, Columbia Valley.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmeasured.							
<i>Montana.</i>																					
Anaconda.	Deer Lodge.	5,300	8	61.8 ^a		89 ^a	1†	39 ^a	21	42 ^a	3.62		0.0	11	18	5	8		C. D. Demond.		
Bison Mountain.	Powell.	7,240									3.25		0.72	0.0	11	17	13	1		C. H. Anderson.	
Columbia Falls.	Flathead.	3,100	15	62.3	-1.6	92	23	31	19	50	3.00	+ 1.28	1.28	0.0	6	12	10	9	sw.	Mrs. I. M. Kennedy.	
Como.	Ravalli.	2	60.4			91	22	40	12†	44	1.70		0.85	0.0	10	16	12	3		Hiram Platt.	
Darby.	do.	3,825									2.00		0.71	0.0	9	15	8	8		W. A. Kerlee.	
Dayton.	Flathead.	2,800																	Charles M. Lawson		
East Anaconda.	Deer Lodge.	5,500	4	62.7		89	16	43	27†	39	3.05		1.84	0.0	11	18	5	8	w.	C. D. Demond.	
Fortine ^a .	Flathead.	2,975	4	59.0		91	4	29	19	51	2.90		1.15	0.0	10	18	3	9	s.	Mike Petery.	
Hamilton.	Ravalli.	3,575	7	65.0		91	1	41	19	41	3.45		1.05	0.0	8	16	5	10	n.	J. B. Currie.	
Hat Creek.	Powell.	6,000											0.98	0.0	10	15	9	7	w.	M. K. Landreth.	
Jocko.	Missoula.	3,100	1	61.6		90	22	39	19	46	3.35		1.07	0.0	9	18	8	5	sw.	George W. Robbins.	
Kalispell.	Flathead.	2,965	11	62.2	-2.1	89	4	38	8	40	3.07	+ 2.23	1.06	0.0	8	14	10	7	w.	U. S. Weather Bureau.	
Lost Creek.	Deer Lodge.	5,200																	Frank Henaut.		
Missoula.	Missoula.	3,225	26	64.6	-2.5	97	22	39	19	47	3.52	+ 2.39	1.31	0.0	11	17	9	5	ne.	U. S. Weather Bureau.	
Ophir.	Powell.	8,800											0.90	0.0	7	17	9	5	w.	E. S. Wilton.	
Ovando.	do.	4,207	11	57.2	-3.4	92	22	33	14†	52	2.67	+ 1.54	0.82	0.0	10	5	25	1	w.	S. B. Muchmore.	
Philipsburg.	Granite.	5,275	6	60.4 ^a		92	2	34 ^a	14†	51	3.21		1.02	0.0	14	19	8	4	sw.	Prof. G. T. Bramble.	
Plains.	Jefferson.	7,000											3.39		13	12	17	2	w.	Mrs. Th. Kiermeyer.	
Pleasant Valley.	Sanders.	2,475	11	63.7	-2.1	91	22	40	7†	42	4.40	+ 2.79	2.00	0.0	5	22	2	7	sw.	M. H. Pierce.	
Poison.	Flathead.	3,500	3	58.9		90	4	30	19†	53	2.54		0.88	0.0	8	22	0	9		A. D. Stillman.	
St. Ignatius.	do.	2,700	1	63.1 ^b		95 ^a	22†	37 ^a	19	51 ^a	2.88		1.09	0.0	9	20	6	5		F. P. Brown.	
St. Regis.	do.	2,650																	U. S. Reclamation Service		
Saltse.	do.	3,600											2.85						R. D. Lee.		
Snowshoe.	Flathead.	4,500	3	58.6		88	22	36	8	36	4.73		1.53	0.0	9	19	4	8	w.	E. K. Tarbox.	
Troy.	do.	1,880	15	60.0	-4.2	103	21	29	10	58	2.69	+ 1.28	1.50	0.0	7	17	8	6		J. S. Riter.	
Upper Lake McDonald.	do.	3,200	3	60.0 ^a		90 ^a	22	31 ^a	19	51 ^a	3.23		0.72	0.0	10	10	17	4	s.	W. E. Milnor.	
Woodville.	Jefferson.	6,376											2.84		8	13	9	9	sw.	F. F. Lisbie.	
<i>Wyoming.</i>																			Anna Kinman.		
Afton.	Uinta.	6,200																	A. V. Call.		
Alta.	do.																		Mrs. Lucy Brown.		
Bedford.	Yellowstone Park.	5,900	10	58.4	-1.4	87	1†	31	7†	48	1.72	+ 0.98	0.74	0.0	5	28	2	1	w.	C. G. Heiner.	
Snake River.		7,000	3	57.1		87	1	30	7†	50	1.07		1.02	0.0	2	21	7	3	s.	U. S. Army.	
<i>Nevada.</i>																					
San Jacinto.	Elko.	5	58.6			93	31	31	28†	53	0.28		0.12	0.0	4	20	2	9	sw.	G. A. Asline.	
<i>Idaho.</i>																			Wm. L. Eames.		
Albion.	Cassia.	7	66.5			99	2	35	8†	56	0.51	+ 0.20	0.36	0.0	4	22	9	0	w.	Francis Wallis.	
Alma.	do.										1.11		0.40	0.0	4	23	7	1	s.	E. A. Dowd.	
Bear Valley ^a .	Boise.	54.5				87	2	28	12	48					6	22	8	1	sw.	Solon A. Bray.	
Blackfoot.	Bingham.	4,503	13	66.6	-1.9	98	1	37	7†	57	0.89	+ 0.38	0.50	0.0	1	22				F. P. Ingraham.	
Blanche.	Lincoln.	71.8				101	23	44	11	52	0.12		0.12	0.0	4	18	13	0		U. S. Weather Bureau.	
Bogus Creek.	Boise.	4,200				101	22	47	7	41	0.17		0.06	0.0	2	20	9	2	sw.	Mrs. Emma Walter.	
Boise.	Ada.	2,770	24	71.5	-1.3	101	22	47	7	41	0.03	- 0.15	0.02	0.0	2	23	6	6	w.	Patrick Moriarty.	
Bonanza.	Custer.	6,600				101	2	37	19	53	2.25	+ 0.60	0.91	0.0	7	20	10	1	sw.	Dr. D. P. Albee.	
Bonners Ferry.	Bonner.	1,850	3	64.2	-1.3	97	22	37	19	53	0.63		0.33	0.0	6	22	6	3		W. A. Hall.	
Boulder Mine.	Boise.	4,800				103	2	45	8	50	0.08	- 0.42	0.08	0.0	2	23	6	6	w.	W. J. Boone.	
Buhl.	Lincoln.	3,800	4	74.2	-0.7	103	2	45	8	50	0.08	- 0.42	0.08	0.0	0	10	17	12	2	sw.	Ednah Faulkner.
Burke.	Shoshone.	4,082	3	57.4	-1.3	91	22	34	19	46	4.80	+ 2.05	1.73	0.0	0	10	23	9	2	w.	C. H. Shepherd.
Caldwell.	Canyon.	2,372	5	70.4	-2.9	102	2†	41	7	47	0.01	- 0.14	0.01	0.0	1	21	9	0		Chas. L. West.	
Camas.	Fremont.	4,815	14	66.4		100	1†	37	28	54	0.50		0.19	0.0	4	15	6	10	sw.	E. J. Hopkins.	
Cambridge.	Washington.	2,651	14	71.4	-0.8	104	2	44	19	55	0.80	+ 0.45	0.62	0.0	4	18	11	2	sw.	Jas. T. Scott.	
Chesterfield.	Bannock.	5,424	13	63.7	+ 2.5	95	2	28	14	59	0.98	+ 0.51	0.45	0.0	0	22	6	3		R. R. Richmond.	
Clawson.	Fremont.	2,157	17	66.1	-1.2	96	23	40	19	47	2.57	+ 1.82	0.72	0.0	5	24	3	4		Emil Schuessler.	
Coeur d'Alene.	Kootenai.	1,520		68.6		100	15†	43	14	53	3.82		2.37	0.0	5	24	3	4		Walter H. Durrant.	
Dent.	do.	1,350	4	68.6 ^a	-0.7	105	23	46 ^a	2†	51 ^a	3.48	+ 2.24	1.35	0.0	8	19	5	4	sw.	Geo. B. Edie.	
Driggs.	do.	6,097	3	60.4	-0.3	90	2	30	12	45	1.80	+ 0.77	0.70	0.0	6	27	1	1	s.	E. L. Marvin.	
Emmett.	Canyon.	2,350	3	73.2	+ 0.2	106	2	45	6	53	1.23		0.35	0.0	0	22	4	5	w.	E. P. Treloar.	
Forney.	Elmore.	13	60.6	+ 0.3	96	1†	28	12	57	2.74	+ 1.62	0.90	0.0	15	16	13	2	sw.	Mrs. Inez H. Davis.		
Garnet.	Elmore.	2,575	10								0.23	- 0.41	0.20	0.0	7	19	6	6	ne.	J. B. Loomis.	
Gilbert.	Nex Perce.	3,030		64.8		97	2	44	12	43	3.59		2.30	0.0	8	21	4	6	sw.	I. E. Perkins.	
Glenns Ferry.	Elmore.	2,569	2	76.2		110	23	40	12	58	0.14	+ 0.67	0.14	0.0	1	30	0	8	3	H. F. Kottkey.	
Grand Forks.	Shoshone.	60.0				97	22	31	21	61	3.24		1.30	0.0	8	20	8	3	w.	N. G. Massey.	
Grandview.	Owyhee.	73.9 ^a				104 ^a	2	44 ^a	28	57 ^a	0.11		0.11	0.0						F. N. Perry.	
Guffey.	do.	2,381		76.4		107	2	47	7	47	0.02		0.02	0.0	1	28	0	3		U. S. Forest Service.	
Hailey.	Blaine.	5,347	7	66.0	-1.0	97	2	38	28	44	0.57	+ 0.08	0.32	0.0	3	22	6	3	sw.	N. W. Irfsield.	
Henry.	Bannock.	50.3				91	16	30	28	52	1.10		0.40	0.0	5	16	5	2	w.	J. M. Waterhouse.	
Hotspring.	Owyhee.	2,752	4	73.7	-1.0	102	2	42	19	50	0.05	- 0.49	0.05	0.0	1	24	7	0		Mrs. Emma Hammer.	
Idaho City.	Bingham.	4,000	11	65.8	-1.6	97	1	37	7	48	0.98	+ 0.42	0.34	0.0	0	7	19	6	6	ne.	Dr. T. M. Bridges.
Idaho Falls.	Bingham.	4,742	14	65.8							0.86		0.46	0.0	0	25	4	2		W. E. Henke.	
Indian Valley.	Washington.	2,999											0.46	0.0	0	3	15	8	5		Miss Martha A. Beam.
Irwin.	Shoshone.	2,330	5	61.8	-3.8	98	23	38	19 ^a	54	2.95	+ 2.20	0.73	0.0							

MONTHLY WEATHER REVIEW.

JULY, 1909

TABLE 1.—Climatological data for July, 1909. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.			
				Mean.			Departure from the normal.			Highest.			Lowest.								
				Date.	Total.	Departure from the normal.	Date.	Greatest in 24 hours.	Total snowfall unmeasured.	Number of rainy days .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Number of .01 inch or more.	Number of clear days.						
<i>Idaho—Cont'd.</i>																					
Pocatello Nursery.	Bannock.	3	63.4	— 2.4	94	1†	32	7	53	1.71	+ 0.24	0.91	0.0	6	17	11	3	sw.	Peter F. Wrensted.		
Poplar.	Bingham.		64.6	.....	96	1†	33	12	53	0.79	— 0.11	0.04	0.0	5	17	11	3	sw.	Stuart Lee.	
Poplars.	Canyon.	2,425	10	63.4	— 2.7	90	22	40	19	42	+ 0.73	0.51	0.0	8	21	4	6	sw.	N. S. Dils.		
Porthill.	Bonner.	1,665	17	63.4	— 3.4	98	22	39	13	52	0.61	— 0.42	0.42	0.0	5	21	4	6	sw.	H. A. French.	
Pyle Creek.	Boise.																		Walter L. Cole.		
Rupert.	Lincoln.	4,204	3	70.5	— 1.0	89	1	41	28	48	0.91	— 0.50	0.51	0.0	4	29	2	0	w.	Will Parry.	
St. Maries.	Kootenai.	2,263	13	62.3	— 3.4	98	22	39	13	52	3.15	+ 1.95	1.34	0.0	8	20	2	9	sw.	J. S. Turnbull.	
Salem.	Fremont.	5,000	5	67.0	+ 0.2	100	2	37	21	55	0.91	+ 0.23	0.47	0.0	6	20	9	2	w.	Geo. H. A. Harris.	
Salmon.	Lemhi.	4,040	4	67.0	— 1.4	98	2	39	7	42	0.96	+ 0.26	0.76	0.0	4	21	7	3	nw.	E. K. Abbott.	
Salmon River Dam.	Twin Falls.	5,000	2	70.2	— 1.4	98	2	39	7	42	0.10	— 0.41	0.08	0.0	0	3	2	0	sw.	Arch M. Gilbert.	
Sheep Hill.	Boise.																		Clifford M. Gardner.		
Silver City.	Owyhee.	6,200	3	62.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. A. Pettit.
Shoshone.	Lincoln.	3,968																	A. O. Treeman.		
Soldier.	Blaine.	5,140	13	68.5	+ 3.8	98	4	41	11	46	0.62	+ 0.21	0.45	0.0	3	27	3	1	w.	W. W. Leek.	
Standrod.	Cassia.	5	65.8	— 1.2	90	1†	38	7	35	1.08	+ 0.39	0.08	0.0	5	23	8	1	s.	T. B. Jones.		
Sugar.	Fremont.	2	63.5	— 1.1	94	2	35	13	47	1.07	+ 0.30	0.36	0.0	5	20	8	3	sw.	Geo. F. Webb.		
Sunnyside.	Elmore.		71.6	.....	104	2	40	28	52	0.05	— 0.05	0.0	0.0	1	20			nw.	E. A. Wilmot.	
Tilden.	Bingham.	4,420	67.5	.....	100	1	37	8	53	0.59	— 0.35	0.0	0.0	3	20	8	3	sw.	Mrs. W. A. Edwards.	
Twin Falls.	Twin Falls.	3,825	4	68.0	— 2.2	98	15†	40	28	51	+ 1.23	+ 0.78	0.67	0.0	4	18	13	0	nw.	Clyde C. Anderson.	
Vernon.	Fremont.	12	64.3	+ 0.1	94	1†	34	13	50	0.82	+ 0.15	0.46	0.0	3	15	13	3	sw.	A. M. Slater.		
Wallace.	Shoshone.	2,728	6	61.2	— 2.1	95	22	39	19	45	3.29	+ 1.40	1.33	0.0	11	21	4	6	sw.	U. S. Weather Bureau.	
Warfield.	Blaine.	6,386	53.2	.....	89	1†	32	12	48	0.79	— 0.46	0.0	0.0	4	22	8	1	sw.	Wm. H. Warfield.	
Wendell.	Lincoln.	3,400	72.1	.....	105	3	41	28	52	0.32	— 0.15	0.0	0.0	2	23	9	0	w.	Chas. L. Dingler.	
<i>Washington.</i>																					
Aberdeen.	Chehalis.	162	57.4	— 2.7	73	13†	40	17	32	2.45	+ 1.50	0.62	0.0	12	6	18	7	w.	C. Weatherwax.		
Anacorts.	Skagit.	60	45.6	.....	78	2	35	3	41	1.76	+ 1.26	1.05	0.0	6	16	10	5	sw.	Douglas Allmond.	
Baker.	Whatcom.	200	61.2	.....	86	21	41	4	41	1.33	— 0.44	0.05	0.0	5	17	4	10	sw.	Robt. M. White.	
Bellingham.	Whatcom.	60	60.0	— 0.8	81	3	41	2†	37	1.53	+ 0.75	0.51	0.0	8	21	4	6	sw.	Sanford B. Mayhew.		
Blaine.	do.	53	59.1	— 1.7	77	21	39	2†	34	2.06	+ 1.25	0.96	0.0	11	14	11	6	w.	G. A. Ruring.		
Bremerton.	Kitssap.																		U. S. Navy Yard.		
Cedar River.	King.	3	61.4	— 2.7	92	21	40	2†	50	1.78	+ 2.14	1.07	0.0	10	11	9	11	w.	Geo. Landsburg.		
Centralia.	Lewis.	212	61.4	— 2.7	92	21	40	2†	50	1.76	+ 1.26	1.05	0.0	6	16	10	5	sw.	I. S. Turner.		
Cheney.	Spokane.	2,351	68.9	.....	98	1†	40	13	52	1.99	+ 1.25	0.55	0.0	4	27	3	1	s.	G. A. Fellows.	
Chopaka.	Okanogan.	1,200	68.2	.....	97	22	40	18	48	2.54	— 0.89	0.0	0.0	8	12	3	16	sw.	Mrs. J. S. Myers.	
Clearbrook.	Whatcom.	140	65.4	.....	86	21	33	2	48	2.72	— 0.89	0.0	0.0	9	11	7	13	s.	Geo. Gibbs.	
Cleawater.	Jefferson.	135	57.4	— 3.5	70 ^b	21	38 ^b	2	32	3.36	+ 1.73	2.00	0.0	12	21	7	2	sw.	Alfred Ritchie.		
Clealum.	Kittitas.	1,930	60.3	— 3.3	90	21	33	19	53	0.32	+ 0.06	0.15	0.0	4	23	4	4	sw.	J. A. Balmer.		
Colfax.	Whitman.	2,300	62.4	— 2.4	92	22	39	21	50	2.85	+ 2.19	0.84	0.0	6	21	4	6	sw.	W. H. James.		
Colville.	Stevens.	1,635	64.0	— 4.4	99	22	35	19	56	1.90	+ 0.73	0.62	0.0	8	19	2	10	sw.	W. L. Sax.		
Conconully.	Okanogan.	2,300	63.8	— 3.9	93	22	39	17†	43	1.92	+ 0.97	0.82	0.0	5	21	4	6	s.	Wm. Baines.		
Couperville.	Island.	150	63.5	— 2.9	97	22	37	19	53	2.07	+ 1.32	0.90	0.0	6	21	5	5	sw.	W. T. Howard.		
Crescent.	Lincoln.	2,250	9	63.5	— 2.9	97	22	37	19	53	2.07	+ 1.32	0.90	0.0	6	21	5	5	sw.	Otto Wolfweber.	
Davenport.	do.	2,450	62.8	.....	93	22	36	17	47	1.13	— 0.42	0.0	0.0	7	22	6	3	sw.	W. H. Reed.	
Dayton.	Columbia.	1,700	66.9	— 2.4	95	3	45	6†	39	3.05	+ 1.37	1.22	0.0	6	17	11	3	sw.	W. H. Hendron.		
Detroit.	Mason.	31	61.2	.....	89	21	43	2†	43	1.78	— 0.64	0.0	0.0	8	15	10	6	s.	Walter O. Eckert.	
Dixie.	Walla Walla.	5,000	84	— 2.2	98	20	39	20	45	1.64	— 0.55	0.0	0.0	7	10	7	5	sw.	T. Z. Andrews.		
Duckabush.	Jefferson.	380	60.2	.....	84	20	39	20	45	1.64	— 0.32	0.0	0.0	10	7	5	19	sw.	Emery J. Finch.	
East Sound.	San Juan.	500	64.9	— 1.0	95	2	41	18	51	0.89	+ 0.70	0.45	0.0	3	24	6	1	nw.	R. Lee Barnes.		
Ellensburg.	Kittitas.	1,571	65.9	— 1.0	95	2	41	18	51	0.89	+ 0.70	0.45	0.0	3	24	6	1	nw.	D. Chaffee.		
Ephrata.	Grant.	1,265	67.3	— 2.4	99	22	43	12	36	0.43	— 0.25	0.0	0.0	5	19	2	10	sw.	C. W. Palmer.		
Forks.	Clallam.	480	60.4	.....	84	20	39	20	45	1.64	— 0.32	0.0	0.0	10	7	5	19	sw.	Dr. G. A. Landes.	
Fort Simcoe.	Yakima.	1,427	70.4	— 3.4	97	22	43	18	42	0.66	+ 0.58	0.50	0.0	3	27	1	3	s.	C. M. Mackintosh.		
Goat Lake.	Snobomish.	2,900	64.0	.....	84	20	39	20	45	1.64	— 0.32	0.0	0.0	8	19	2	10	sw.	John W. Anderson.	
Gold Creek.	Yakima.	2,600	64.8	.....	100	21	38 ^b	18	52	2.39	+ 0.88	0.90	0.0	15	13	8	10	sw.	Klickitat Co. Abstract Co.	
Goldendale.	Klickitat.	397	6	.....	103	21	38	21	65	0.50	— 0.15	0.22	0.0	4	19	5	5	sw.	C. H. Cleaver.	
Granite Falls.	Adams.	1,100	64.8	.....	104	2	44	11	51	0.15	+ 0.07	0.08	0.0	7	17	9	5	sw.	Dr. A. V. Marion.	
Hatton.	Columbia.	1,400	1	.....	95	21	41	18	48	1.72	— 0.67	0.0	0.0	5	23	3	6	s.	Dr. B. Hill.	
Irene Mount.	Okanogan.	3,015	72.2	— 5.4	98	22	41	18	48	1.72	— 0.67	0.0	0.0	7	17	9	5	sw.	Mrs. E. W. Wheeler.		
Kennediuk.	Benton.	367	66.0	.....	100	22	46	11†	46	0.39	— 0.23	0.0	0.0	5	23	3	6	sw.	L. W. Soth.	
Kettle Falls.	Stevens.	1,265	66.0	.....	98	21	41	18	48	1.72	— 0.67	0.0	0.0	7	17	9	5	sw.	Dr. A. E. Baldwin.	
Kiona.	Benton.	430	71.8	.....	100	22	46	11†	46	0.39	— 0.23	0.0	0.0	8	17	7	7	sw.	Dr. F. S. Hedger.	
Kosmos.	Lewis.	775	61.6	.....	89	21	38	4†	49	0.87	— 0.29	0.0	0.0	8	17	7	7	sw.	Hon. J. A. Ulsh.	
La Center.	Clarke.	250	60.8	— 3.8	90	21	41	4	44	2.04	+ 1.21	0.83	0.0	7	16	9	6	sw.	Joseph Brothers.		
La Crosse.	Whitman.	1,400	66.2	.....	98	22	39	12†	56	1.84	— 0.10	0.0	0.0	8	19	7	5	sw.	M. E. Schreck.	
Lake Clealum.	Kittitas.	2,171	59.4	.....	90	21	32	21	58	0.53	— 0.17	0.0	0.0	5	17	8	6	nw.		

TABLE 1.—*Climatological data for July, 1909. District No. 12—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest. Date.	Lowest. Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmeasured.	Number of rainy days, 0 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Cont'd.																		
Ritzville.	Adams.	1,825	10						0.93	+ 0.70	0.40	0.0	5	15	5			
Rock Lake.	Whitman.	1,750	3	64.3*	— 0.1	94* 2†	39* 12†	46	1.61	0.62	0.0	6	21	2	8	s.		
Rosalia.	do.	2,425	17	64.3		94 22	43 18†	41	2.18	+ 1.25	0.60	0.0	8	19	5	sw.		
Russell's Ranch.	Yakima.	2,870							0.75		0.46	0.0	4	23	0	9	sw.	
Seattle (1).	King.	123	18	60.6	— 2.9	78 21	50 19	26	0.35	— 0.34	0.26	0.0	6	9	7	15	s.	
Seattle (2).	do.			60.8		78 14†	47 13	29	0.25		0.14	0.0	5	16	5	10	s.	
Sedro-Wooley.	Skagit.	38	12	61.2	— 1.0	90 21	33 20	30	54	1.86	+ 0.43	1.23	0.0	6	13	11	7	sw.
Sixprong.	Klickitat.	1,240	2	70.6		98 21	50 58	87	38	0.20		0.08	0.0	4	22	2	7	sw.
Skagit Power Dam.	Whatcom.								1.55		0.50	0.0	8					
Snohomish.	Snohomish.	50	15	60.0	— 2.7	80 29	41 19	35					10	5	3	nw.		
Snoqualmie Falls.	King.	667	10	63.1	— 1.7	90 21	40 19	48	1.24	+ 0.04	0.42	0.0	6	21	0	10	sw.	
Snyder's Ranch.	Okanogan.	2,200							1.79		0.78	0.0	4	18	9	4	e.	
South Bend.	Pacific.	16	14	60.5	— 1.9	74 19	43 15	27	1.98	+ 0.93	0.71	0.0	6	16	4	11	sw.	
Spokane.	Spokane.	1,943	28	65.9	— 2.9	95 22	48 19	36	2.37	+ 1.70	1.07	0.0	7	18	6	7	sw.	
Stehekin.	Chelan.	1,100	3														M. E. Field.	
Stokes Ranch.	Okanogan.	2,670															Amos Stokes.	
Sullivan Lake.	Stevens.	2,700															Mrs. Jennie D. McAbee.	
Summer.	Pierce.	77	1	60.2		86 21	37 2	42	0.86		0.38	0.0	7	14	5	12	sw.	
Sunnyside.	Yakima.	740	14	68.4	— 3.3	98 2†	41 17	49	0.52	+ 0.35	0.47	0.0	3	22	4	5	sw.	
Tacoma.	Pierce.	213	23	60.9	— 2.5	82 21	46 4	32	0.86	+ 0.20	0.51	0.0	5	10	11	10	n.	
Tatoosh Island.	Clallam.	86	24	54.4	— 0.7	62 28	47 17	13	1.83	+ 0.05	1.24	0.0	13	7	8	16	s.	
Tieton.	Yakima.	2,000	66.5			95 2†	42 11	47	0.47		0.25	0.0	3				U. S. Reclamat'n Service.	
Touchet.	Walla Walla.	556	2	70.2		101 2	43 12†	54	0.11		0.10	0.0	2	19	6	6	sw.	
Touchet Ridge.	Columbia.	2,500	5							4.27		1.71	0.0	4	21	7	3	sw.
Trinidad.	Douglas.	900				98 2†					0.68	0.0	1	14	5	3	nw.	
Twisp.	Okanogan.	1,619	6	66.4*		98* 22	41* 17	51	0.96		0.65	0.0	3	18	2 ^b	9	sw.	
Tyee.	Chelan.	2,000									0.35	0.0	2	15	9	7	sw.	
Vancouver.	Clarke.	100	34	63.5	— 3.1	87 21	47 31	39	2.41	+ 1.34	0.85	0.0	8	12	9	10	nw.	
Vashon Island.	King.	110	20	60.2	— 2.8	82 21	43 1	34	0.74	+ 0.18	0.40	0.0	4	21	2	8	n.	
Wahluke.	Grant.	410	5	71.7		101 22	41 17	48	0.44		0.41	0.0	2	25	4	2	sw.	
Wallace.	Okanogan.	4,000								2.17		1.34	0.0	2			Geo. A. Wallace.	
Walla Walla.	Walla Walla.	1,000	25	70.9	— 3.2	100 2	48 18	40	1.21	+ 0.82	0.79	0.0	5	21	6	4	s.	
Waterville.	Douglas.	2,624	19														O. R. Hopewell.	
Wenatchee (near).	Chelan.	1,169	10	66.8	— 2.7	91 22	46 7†	33	0.71	+ 0.38	0.58	0.0	2	20	3	8	w.	
West Branch.	Spokane.	2,600															Martin A. Murray.	
Wilbur.	Lincoln.	2,203	10	62.8	— 1.4	96 22	30 17	53	0.60	+ 0.02	0.44	0.0	3	21	5	5	sw.	
Yale.	Cowlitz.	375	2	62.0		89 21	41 4†	39	3.34		1.80	0.0	7	13	14	4	sw.	
Zindel.	Aston.	715	7	74.0		107 22	50 7	41	2.73	+ 1.65	1.97	0.0	6	16	10	5	n.	
Oregon.																	M. W. Zindel.	
Albany.	Linn.	214	33	62.8	— 3.6	90 21	42 18	43	1.34	+ 0.87	0.68	0.0	5	17	6	3	n.	
Ashland.	Jackson.	1,940	25	66.4	— 3.2	93 21	43 18	39	0.60	+ 0.31	0.55	0.0	2	20	5	5	nw.	
Astoria.	Clatsop.	11	47	60.8	— 0.7	76 4	45 5	28	2.41	+ 1.39	1.57	0.0	9	19	0	12	nw.	
Baker City.	Baker.	3,460	20	63.3	— 3.0	94 22	33 7	41	0.64	+ 0.10	0.33	0.0	6	19	8	4	nw.	
Birch Creek.	Tillamook.	14	13	60.2	+ 1.1	84 29	33 4†	38	2.35	+ 1.28	0.78	0.0	13	12	8	11	nw.	
Black Butte.	Wheeler.	2,900		66.9		97 2	40 18	40	0.90		0.42	0.0	4	20	10	1	w.	
Blackrock.	Lane.	1,200	8	59.6	— 6.0	83 21	37 14	46	2.01	+ 1.16	0.90	0.0	6	21	6	4	ne.	
Binalock.	Gilliam.	237	10	74.6	— 3.3	103 21	50 18	43	0.17	+ 0.05	0.17	0.0	1	21	1	4	w.	
Buckhorn Farm.	Josephine.	1,300	5	64.8	— 2.9	95 21	38 1	50	0.60	+ 0.42	0.53	0.0	2	22	2	7	n.	
Cascade Locks.	Hood River.	100	18	64.0	— 4.1	84 21	47 31	37	1.29	+ 0.46	0.52	0.0	10	17	8	6	w.	
Cazadero.	Clackamas.	514	62.6			88 21	44 4†	43	2.53		1.04	0.0	10	15	7	9	w.	
Condon.	Gilliam.	2,884	1	62.0		90 22	36 18	53	0.91		0.52	0.0	2	25	5	6	w.	
Corvallis.	Benton.	600	7	62.0	— 3.1	86 2	42 4	40	1.10	+ 0.85	0.81	0.0	3	18	7	6	w.	
Dayville.	Grant.	1,500	14	68.3	+ 0.4	102 2	38 18	57	1.13	+ 0.75	0.40	0.0	7	23	6	1	nw.	
Doraville.	Columbia.	600	7	58.4	— 4.6	81 21	42 18	38	2.58	+ 1.37	0.71	0.0	12	12	4	15	nw.	
Drain.	Douglas.	300	6	63.5	— 3.2	92 21	40 17	48	0.84	+ 0.43	0.92	0.0	7	16	9	6	nw.	
Echo.	Umatilla.	625	5	72.2		106 21	45 18	53	0.21	+ 0.16	0.11	0.0	2	25	3	3	w.	
Ella.	Morrow.	10	70.4			101 21	45 1	51	0.27	+ 0.20	0.22	0.0	2	24	6	1	sw.	
Eugene.	Lane.	449	18	62.8	— 2.9	86 21	43 4	37	0.75	+ 0.27	0.43	0.0	4	20	4	7	w.	
Fairview.	Coos.	142	11	55.8	— 6.1	76 1	38 3	20	3.65	+ 0.29	0.30	0.0	3	26	0	5	nw.	
Fall City.	Polk.	355	11	60.4	— 3.1	88 21	36 4	44	0.80	+ 0.47	0.59	0.0	4	17	9	5	e.	
Forest Grove.	Washington.	220	19	63.7	— 1.5	91 23	40 5	45	1.95	+ 1.69	0.98	0.0	6	10	16	5	nw.	
Gardiner.	Douglas.	72	19	60.3	+ 0.2	75 30	44 18	29	1.73	+ 0.83	0.30	0.0	7	14	14	3	n.	
Glenora.	Glenn.	1,441	5	63.4		95 21	34 17	54	0.25		0.25	0.0	1	25	4	3	nw.	
Gold Beach.	Tillamook.	575	17	58.4	— 4.1	84 2	33 4†	47	4.24	+ 1.91	0.72	0.0	11	15	3	13	sw.	
Granite.	Curry.	40	6			73 17				1.14	+ 0.96	0.26	0.0	7	22	1	8	nw.
Grants Pass.	Grant.	4,680	4	57.0		91 2†	28 18	56	0.97	+ 0.27	0.37	0.0	4	9	17	5	nw.	
Grass Valley.	Sherman.	956	20	66.6	— 2.8	100 21	37 18	54	0.29	+ 0.19	0.22	0.0	2	22	8	6	sw.	
Greenleaf.	Lane.	2,381	7	59.0	— 5.2	90 20	32 3	37	0.10	— 0.09	0.08	0.0	2	7	16	8	sw.	
Headworks.	Clackamas.	9	60.4			87 23	39 1	42	1.15		0.36	0.0	8	15	6	10	nw.	
Heppner.	Hood River.	719	10	60.2	— 4.9	85 21	43 21	41	4.93	+ 3.58	1.58	0.0	11	15	5	11	sw.	
Hermiston.	Morrow.	1,950	20	65.0	— 3.7	98 21	40 13	48	0.30	— 0.17	0.11	0.0	4	23	4	4	sw.	
Hood River.	Umatilla.	450	4	71.4		100 2†	46 14	43	0.21	+ 0.20	0.10	0.0	3	22	3	6	sw.	
Huntington.	Baker.	243	18	65.0	— 2.2	85 21	40 6	51	0.45	+ 0.27	0.45	0.0	1	20	7	4	w.	
Jacksonville.	Baker.	2,110	7	74.2	— 3.9	99 24	50 7	99	0.80	+ 0.54	0.50	0.0	3	19	9	3	nw.	
Jacksonville.	Jackson.	1,640	20	67.6	— 2.1	97 22	42 13	75	0.26	+ 0.07	0.22	0.0	2	20	7	4	sw.	
La Grande.	Union.	2,794	21	61.2	— 7.7	97 2†	40 17	50	1.58	+ 0.94	0.91	0.0	7	23	6	3	nw.	
Madras.</td																		

TABLE 1.—Climatological data for July, 1909. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days .01 inch or more.	Number of partly cloudy days.	Number of cloudy days.	
Oregon—Cont'd.																		
Siskiyou.....	Jackson.....	4,115	1	58.6	.....	85	2†	38	18	33	1.44	.....	1.11	0.0	5	20	8	3 ne.
Stafford.....	Clackamas.....	13	62.0	— 4.1	89	21	41	13	43	2.03	+ 1.28	1.11	0.0	9	20	3	8 n.	
The Dalles.....	Wasco.....	112	31	65.7	— 3.6	98	21	45	18	46	0.39	+ 0.24	0.22	0.0	2	26	3	w.
Toledo.....	Lincoln.....	59	19	53.0	— 3.2	74	23†	42	17	32	2.11	+ 1.61	1.01	0.0	7	21	7	3 nw.
Umatilla.....	Umatilla.....	340	19	71.8	— 0.8	102	2	47	20	43	0.26	+ 0.09	0.13	0.0	3	23	1	7 w.
Vale.....	Malheur.....	2,450	17	72.0	+ 2.1	103	2	36	7	59	0.13	— 0.13	0.09	0.0	2	20	2	0 ne.
Wallace Orchard.....	Polk.....	62.4	.....	85	21†	42	13†	41	19.4	.....	0.93	0.0	3	11	13	7	...	
Wallowa.....	Wallowa.....	2,935	6	62.0	— 3.0	98	22	37	12†	54	2.42	+ 1.82	1.63	0.0	7	12	9	10 nw.
Warmspring.....	Crook.....	1,800	7	65.0	.....	109	2	35	18	50	0.22	— 0.48	0.22	0.0	1	19	2	10 nw.
Weston.....	Umatilla.....	1,809	19	69.5	— 1.7	97	21	39	18	49	0.94	+ 0.22	0.53	0.0	4	19	6	se.
Williams.....	Josephine.....	...	61.3	— 2.1	93	23	39	18†	54	0.30	+ 0.22	0.35	0.0	2	17	4	10 n.	

* Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.

** Precipitation included in that of the next measurement.

† Also on other dates.

§ Data are from standard instruments not supplied by the U. S. Weather Bureau.

|| Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

|| Estimated by observer.

||| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

Louise F. Bates.
J. P. Gage.
S. L. Brooks.
C. B. Crosno.
Mrs. H. T. Duncan.
H. P. Osburn.
Chas. A. Park.
L. J. Coverstone.
Claude C. Covey.
M. A. Baker.
J. M. John.

TABLE 2.—*Daily precipitation for July, 1909. District No. 12, Columbia Valley.*

TABLE 2.—*Daily precipitation for July, 1909. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for July, 1909. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for July, 1909. District No. 12—Continued.*

TABLE 3.—*Maximum and minimum temperatures at selected stations for July, 1909. District No. 12, Columbia Valley.*

Date.	Montana.				Aitkin, Wyo.				Idaho.								Vernon.				Wallace.						
	Kettlebell.		Missoula.		Aitkin, Wyo.		Boise.		Bonner Ferry.		Hot Springs.		Lewiston.		Mackay.		Meadow.		Pocatello.		Salmon.		Shoshone.				
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
1...	82	52	90	53	.....	.....	91	60	88	50	96	58	89	58	93	.....	89	44	97	58	95	47	.....	94	51	80	46
2...	85	50	95	49	.....	.....	100	62	91	47	102	63	103	58	96	.....	97	44	98	68	100	56	.....	94	51	88	63
3...	82	55	85	53	.....	.....	97	74	93	45	100	75	95	66	92	.....	93	50	88	62	86	64	.....	90	63	86	53
4...	89	56	90	53	.....	.....	94	63	91	48	97	70	92	67	83	.....	90	50	87	60	90	58	.....	87	56	84	62
5...	84	57	83	53	.....	.....	81	55	91	53	90	58	78	60	82	.....	80	47	87	56	88	46	.....	85	49	82	57
6...	86	47	69	54	.....	.....	70	49	61	50	76	54	68	54	77	.....	67	38	71	50	88	54	.....	66	40	59	42
7...	56	43	53	43	.....	.....	74	47	59	44	64	46	64	53	79	.....	62	42	74	47	78	51	.....	68	35	56	44
8...	87	38	74	48	.....	.....	81	53	72	45	84	49	81	49	81	.....	80	35	85	44	82	46	.....	85	35	69	46
9...	72	46	77	46	.....	.....	88	53	83	43	91	51	98	57	76	.....	84	37	82	48	82	44	.....	79	40	76	43
10...	65	52	65	50	.....	.....	74	60	67	52	90	58	75	60	77	.....	70	52	78	60	75	50	.....	70	50	68	52
11...	63	50	64	52	.....	.....	76	59	67	51	82	59	78	60	70	.....	74	49	73	57	73	52	.....	74	54	62	43
12...	70	45	74	41	.....	.....	83	51	71	44	88	48	81	53	85	.....	79	35	81	45	79	39	.....	77	35	66	41
13...	73	42	75	42	.....	.....	82	51	75	43	86	52	81	53	87	.....	81	38	83	52	82	44	.....	81	34	71	39
14...	75	42	82	42	.....	.....	88	52	81	39	90	51	90	52	83	.....	88	36	87	49	87	39	.....	83	40	77	40
15...	80	46	87	46	.....	.....	98	57	87	42	97	54	97	57	85	.....	92	39	92	50	91	44	.....	87	41	84	46
16...	82	49	88	49	.....	.....	92	58	83	48	96	52	88	61	90	.....	88	45	95	64	97	42	.....	89	51	79	45
17...	82	48	83	47	.....	.....	93	54	80	43	95	50	78	55	87	.....	85	43	92	63	98	46	.....	85	48	72	42
18...	72	47	78	52	.....	.....	78	50	71	44	90	50	78	57	88	.....	79	39	85	62	85	56	.....	83	55	66	45
19...	76	39	84	39	.....	.....	88	52	83	37	92	42	89	50	84	.....	85	35	91	62	88	44	.....	77	39	70	39
20...	63	42	69	44	.....	.....	84	56	84	40	89	55	90	60	65	.....	79	49	80	55	81	51	.....	77	55	77	40
21...	80	44	86	43	.....	.....	91	58	91	42	91	50	98	55	77	.....	81	40	85	45	85	37	.....	80	36	86	41
22...	89	49	97	50	.....	.....	101	62	97	44	90	50	101	61	87	.....	98	40	92	53	96	41	.....	89	45	95	52
23...	87	60	94	57	.....	.....	94	66	91	53	95	54	94	66	86	.....	94	54	90	60	94	54	.....	90	50	85	52
24...	85	49	93	58	.....	.....	94	64	91	51	96	56	94	60	84	.....	93	46	92	58	93	45	.....	87	53	84	44
25...	82	58	86	48	.....	.....	88	56	90	52	96	55	84	64	82	.....	86	43	92	62	97	45	.....	80	52	80	52
26...	65	55	71	55	.....	.....	77	57	93	50	98	60	74	61	78	.....	72	59	78	54	85	57	.....	72	55	70	53
27...	59	52	58	52	.....	.....	63	54	80	51	92	53	66	57	61	.....	59	45	65	49	70	43	.....	62	49	61	51
28...	66	52	70	48	.....	.....	79	52	70	55	90	58	78	56	71	.....	71	44	78	43	70	47	.....	74	38	84	49
29...	73	47	80	48	.....	.....	88	53	80	45	100	50	68	58	81	.....	88	40	87	50	83	44	.....	82	41	76	46
30...	82	49	87	46	.....	.....	94	60	84	46	97	70	90	60	85	.....	88	41	90	50	87	44	.....	87	45	79	42
31...	82	49	89	50	.....	.....	94	59	91	45	95	55	91	59	88	.....	90	47	92	53	90	44	.....	90	45	78	43
Mns	75.6	48.7	80.2	49.1	.....	.....	86.4	56.6	81.8	46.5	91.9	55.4	85.0	58.2	81.9	.....	82.5	43.4	85.3	54.3	86.2	47.7	.....	82.2	46.4	75.4	46.9

Washington.

Date.	Aberdeen.				Blaine.				Colville.				Kosmos.				Lakeside.				North Head.				North Yakima.				Odessa.				Port Crescent.				Seattle.				Spokane.				Tacoma.				Tatooch Island.			
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Spokane.		Tacoma.		Tatooch Island.																											
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.														
1...	71	43	70	41	91	43	81	41	81	59	57	53	88	59	88	45	59	45	70	52	88	54	86	54	71	50	61	53	82	44	70	49	82	54	75	52	62	50	82	55	71	53										
2...	70	42	73	39	94	44	89	40	92	55	56	52	96	55	95	43	71	51	96	58	90	54	94	54	75	52	62	50	87	57	71	51	87	57	74	52	62	50	87	55	71	53										
3...	71	43	75	42	97	43	81	43	93	59	58	53	94	64	95	56	80	50	73	53	93	63	92	57	74	52	62	50	87	55	71	51	87	57	74	52	62	50	87	55	71	53										
4...	63	53	73	45	92	43	81	38	86	62	56	56	90	54	88	51	58	46	71	51	90	55	89	60	74	52	62	50	87	55	71	51	87	57	74	52	62	50	87	55	71	53										
5...	59	53	70	47	82	44	69	53	80	63	56	54	86	64	81	56	59	50	59	53	86	57	84	57	74	56	61	54	82	55	71	51	87	57	74	52	62	50	87	55	71	53										
6...	55	52	59	54	64	50	51	71	56	54	52	74	52	62	49	57	50	58	53	86	55	88	57	74</																												

TABLE 3.—*Maximum and minimum temperatures at selected stations for July, 1909. District No. 12—Continued.*

Date.	Walla Walla, Wash.		Oregon.																				The Dalles.		Vale.		
			Ashland.		Baker City.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.								
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1.....	88	60	84	50	83	57	78	45	69	.....	92	61	66	45	78	51	83	46	82	45	87	58	100	58	100	61
2.....	100	60	90	55	91	52	85	47	66	.....	100	52	62	48	84	56	92	51	88	48	94	55	106	55	106	54
3.....	93	68	81	53	84	60	81	47	63	.....	94	69	63	53	77	53	83	51	80	45	88	50	101	50	101	66
4.....	90	60	78	50	85	51	73	43	65	.....	92	59	67	52	78	51	85	38	72	44	88	53	97	53	97	60
5.....	75	58	59	47	76	48	65	52	65	.....	79	60	64	49	57	54	64	45	61	51	81	61	90	61	90	53
6.....	68	52	64	48	50	41	69	51	68	.....	69	53	66	52	59	53	53	45	63	49	66	54	77	54	77	46
7.....	74	51	70	47	67	33	70	50	66	.....	78	52	64	48	69	55	74	37	78	45	71	55	82	55	82	36
8.....	85	53	83	44	74	43	70	52	66	.....	87	48	64	52	68	54	78	43	79	50	83	50	90	50	90	55
9.....	83	58	74	54	77	48	71	53	65	.....	89	58	64	54	67	57	74	47	70	55	78	60	88	60	88	45
10.....	75	56	76	56	68	54	66	53	77	.....	78	61	68	54	62	57	71	53	73	56	71	60	84	59	84	59
11.....	78	57	79	56	70	51	73	51	65	.....	80	54	66	56	71	57	73	51	79	56	76	54	83	54	83	55
12.....	78	54	80	50	76	44	70	51	65	.....	81	50	65	46	64	54	77	39	74	54	74	54	90	43	90	43
13.....	79	52	85	48	74	44	74	47	68	.....	84	48	64	48	76	47	78	36	81	45	81	47	87	50	87	50
14.....	90	56	88	53	81	46	82	49	68	.....	91	46	63	53	84	56	85	37	87	49	90	50	96	48	96	48
15.....	93	60	84	55	89	50	83	48	70	.....	94	51	67	54	71	53	64	43	76	43	88	60	103	46	103	46
16.....	78	59	73	52	77	52	70	53	64	.....	81	52	66	54	71	56	74	38	70	55	73	58	99	59	99	59
17.....	74	54	69	52	73	46	69	51	73	.....	77	51	67	43	66	53	67	37	67	51	72	48	94	54	94	54
18.....	76	48	73	43	70	39	70	45	65	.....	78	58	65	41	71	49	71	32	73	43	76	45	85	49	85	49
19.....	86	54	79	55	80	47	80	51	71	.....	90	51	68	50	83	56	78	48	79	53	86	47	92	43	92	43
20.....	88	60	84	50	77	53	79	46	69	.....	91	61	67	45	79	53	82	43	86	45	85	56	95	44	95	44
21.....	98	61	93	58	86	48	86	49	68	.....	100	52	65	48	88	54	92	44	88	51	96	50	105	46	105	46
22.....	98	67	95	58	94	53	85	50	68	.....	97	61	67	55	75	56	85	50	81	51	85	68	102	66	102	66
23.....	92	61	90	55	87	55	81	49	68	.....	96	60	66	51	80	55	87	44	86	50	90	53	100	56	100	56
24.....	88	66	85	57	88	53	81	47	69	.....	92	60	74	56	79	54	95	42	82	48	84	58	98	54	98	54
25.....	81	63	78	56	73	52	71	56	66	56	34	62	68	56	73	57	73	42	73	59	78	60	92	56	92	56
26.....	70	57	69	52	65	51	67	55	66	54	78	57	65	55	68	56	65	44	69	55	73	59	81	59	81	59
27.....	64	55	71	53	54	48	70	55	68	.....	53	76	51	68	55	67	49	71	54	72	60	74	52	74	52	74
28.....	80	57	88	49	72	48	77	54	68	51	81	57	68	51	73	58	78	40	83	49	80	58	83	41	83	41
29.....	90	61	88	53	80	49	81	51	61	52	96	52	63	57	80	57	85	45	84	52	88	62	95	43	95	43
30.....	92	63	87	56	84	54	82	49	66	45	99	63	69	48	80	57	85	49	86	50	89	60	99	49	99	49
31.....	91	65	90	58	85	54	82	52	69	45	93	62	63	57	71	59	87	46	80	52	84	61	101	54	101	54
Mean.....	83.6	58.2	80.2	52.5	77.4	49.3	75.6	50.1	67.2	.....	87.0	55.9	66.0	51.2	73.2	54.6	78.5	43.7	77.4	50.3	81.5	55.9	92.5	51.6	92.5	51.6